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EXAMINER	
PEREZ, JULIO R	
ART UNIT	**PAPER NUMBER**
2681	9

DATE MAILED: 04/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/754,278	KUBOTA, HIROSHI	
	Examiner	Art Unit	
	Julio R Perez	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02/03/04*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-17* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-17* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Further, the applicant argues that Bender et al. do not teach assurance of a handoff to the adjacent communications system or does not confirm that the second MSC has established a channel with the mobile station.

However, the examiner respectfully disagrees. After acceptance of the handoff request, initiation information is transmitted to the mobile and link information forwarded to the other system BSC for steady state soft handoff to occur (col. 5, lines 33-50). Moreover, the BSC 24B works in conjunction with its own coverage area MSC, which, in turn, takes over the control of the BSC 24B operational coverage area and other functions typically performed by a MSC to include switching, network interfacing, common channel signaling, and more; indeed, the other system MSC taking care of the whereabouts of the mobile subscriber (col. 5, lines 8-19 and 42-50).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Bender et al. (6,002,933).

Regarding claim 1, Bender et al. disclose a mobile communication system comprising: a base station disposed in each of service areas for performing radio communication with a mobile station positioned in any of said service areas (Fig. 2, refs, 22A, B, C, D, 20); a base station controller (24A) having channel station data indicative of whether there is a channel between a mobile switching center as a master station, thereof and another mobile switching center, said base station controller (24B) having means for, when a hand-off control process is to be performed via said mobile switching center as the master station while communicating with said mobile station through said base station, determining whether or not, based on said channel station data, said mobile switching center as the master station has a channel connected to the other mobile switching center (col. 5, lines 8-30, the mobile station receives pilot channel from base station 22B, located in the other system; in turn, the components within the base station controller, BSC 24A, determine that the strong pilot is actually from a base station located within the BSC 24B coverage area, which corresponds to the foreign system; further, a handoff is requested in which the BSC 24 is defined for conducting the inter-system handoff), and, if said mobile switching center as the master station has a channel connected to the other mobile switching center, requesting a hand-off control process as a process for switching communication channels for communication with said mobile station (Col. 4, lines 42-63; col. 5, lines 15-19 and 34-50, after determining that the base station 22B, which has transmitted the strongest channel pilot to the mobile, and which is controlled by BSC 24B, which belongs to the other system, where the mobile is heading, the BSC 24B requests a handoff. Consequently, it is inherent as

evidenced by the fact that one of ordinary skill in the art would have recognized that the BSCs react and coordinate in accordance with the mobile switching center commands; further, inherently, after receiving the request for channel resources from the home MSC, the other system MSC commands the controller of base station 22B to establish a reverse link and acquire the signal transmitted by the mobile station; therein, the various systems that make up BSC 24A exchange signaling and information (channel station data) using network packets that are routed by CIS (30). CCP (42) allocates and de-allocates resources for processing the call including signal processing resources within base stations (22A –22D) and selector resources within selector subsystem (40)); and a mobile switching center as the master station of said base station controller, for performing a hand-off control process between itself and said other mobile switching center when said hand-off control process is requested (Col. 5, lines 1-19, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the function of a MSC is to provide switching functions, manage resources, as well controlling mobility specific signaling, and control all connections from a mobile terminal within the domain of a certain MSC to another MSC; Further, BSCs can be controlled by a MSC).

Regarding claim 2, Bender et al. disclose a mobile communication system comprising: one or more base stations disposed in each of service areas for performing radio communication with a mobile station positioned in any of said service areas (Fig. 2, 22A, B, C, D, 20); one or more base station controllers serving as a master station (24A) of said one or more base stations (22A-D) and having channel station data

indicative of whether there is a channel (46) between a mobile switching center as a master station (other MSC, where BSC 24B is located within) thereof and another system mobile switching center in another system of different specifications (first home MSC, where BSC 24A is located within), said one or more base station controllers (24A-B) having means for, when a hand-off control process is to be performed via said mobile switching center as the master station (first home MSC, where BSC 24A is located within) while communicating with said mobile station through said base station during an inter-base-station-controller soft hand-off control process (Col. 5, lines 15-43, an inter-system handoff is performed), determining whether or not based on said channel station data, said mobile switching center as the master station has a channel connected to the other system mobile switching center (col. 5, lines 8-30, the mobile station receives pilot channel from base station 22B, located in the other system; in turn, the components within the base station controller, BSC 24A, determine that the strong pilot is actually from a base station located within the BSC 24B coverage area, which corresponds to the foreign system; further, a handoff is requested in which the BSC 24 is defined for conducting the inter-system handoff), and, if said mobile switching center as the master station has a channel connected to the other system mobile switching center, requesting an inter-system hand-off control process (Col. 5, line 19) as a process for switching communication channels between said mobile station and said other system mobile switching center to said mobile switching center as the master station (Col. 4, lines 42-63; col. 5, lines 15-19 and 34-50, after determining that the base station 22B, which has transmitted the strongest channel pilot to the mobile, and which is controlled

by BSC 24B, which belongs to the other system, where the mobile is heading, the BSC 24B requests a handoff. Consequently, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the BSCs react and coordinate in accordance with the mobile switching center commands; further, inherently, after receiving the request for channel resources from the home MSC, the other system MSC commands the controller of base station 22B to establish a reverse link and acquire the signal transmitted by the mobile station; therein, the various systems that make up BSC 24A exchange signaling and information (channel station data) using network packets that are routed by CIS (30). CCP (42) allocates and de-allocates resources for processing the call including signal processing resources within base stations (22A – 22D) and selector resources within selector subsystem (40)); and a mobile switching center as the master station of said base station controller, for performing a hand-off control process between itself and said other mobile switching center when said hand-off control process is requested (Col. 5, lines 1-19, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the function of a MSC is to provide switching functions, manage resources, as well controlling mobility specific signaling, and control all connections from a mobile terminal within the domain of a certain MSC to another MSC; Further, a number of BSCs served by a MSC), and, if said mobile switching center as the master station (first home MSC, where BSC 24A is located within) does not have a channel connected to the other system mobile switching center (other MSC, where BSC 24B is located within), requesting an intra-system hand-off control process between said mobile station and the mobile switching

center in a home system (Col. 7, lines 46-67; col. 8, lines 1-16, intra-system handoff occurs between two base stations that are coupled to two BSCs coupled to same cellular system; the performance of intra-system soft handoff enhances the chances of appropriate and consistent call processing); and one or more interconnected mobile switching centers serving as a master station of at least one of said one or more base station controllers (24A-B), for performing said hand-off control process in a home system when the intra-system hand-off control process is requested, at least one of said one or more interconnected mobile switching centers (first home MSC, where BSC 24A is located within) having a communication channel 46 connected to the other system mobile switching center (other MSC, where BSC 24B is located within), for performing a predetermined hand-off control process between itself and said other system mobile switching center (other MSC, where BSC 24B is located within) when said inter-system hand-off control process is requested (Col. 5, lines 1-19; col. 7, lines 50-67; col. 8. lines 1-4) it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the function of a MSC is to provide switching functions, manage resources, as well controlling mobility specific signaling, and control all connections from a mobile terminal within the domain of a certain MSC to another MSC; Further, a number of BSCs can be controlled by a MSC).

Regarding claim 3, Bender et al. disclose a mobile communication system further comprising a communication channel (46) between only a mobile switching center (first home MSC, where BSC 24A is located within, which comprises BSC 24, CIS 30, Selector switch 40, CCP 42, and Admission Control Subsystem 44) adjacent to a

service area of the other system including an overlay and said other system mobile switching center (Figure 2; col. 4, lines 42-53, other MSC, where BSC 24B is located within).

Regarding claim 4, Bender et al. disclose a mobile communication system (Figure 2) wherein said mobile switching center comprises means for, when said intra-system hand-off control process is requested, selecting a mobile switching center in the home system which has a communication channel connected to said other system mobile switching center, and performing a hand-off control process between itself and the selected mobile switching center (Col. 7, lines 46-67; col. 8, lines 1-16, intra-system handoff occurs between two base stations that are coupled to two BSCs coupled to same cellular system; the performance of intra-system soft handoff enhances the chances of appropriate and consistent call processing).

Regarding claim 5, Bender et al. disclose a mobile communication system wherein said home system comprises a mobile communication system according to code division multiple access principles. (Col. 3, lines 60-64, therein, a radio frequency signal interface operating in accordance with physical signal modulation techniques of the IS-95 over-the-air protocol including the use of CDMA signal modulation).

Regarding claim 6, Bender et al. disclose a mobile communication system wherein said home system comprises a mobile communication system according to code division multiple access principles. (Col. 3, lines 60-67; col. 4, lines 1-8, wherein the home mobile communication system operating in accordance with physical signal

modulation techniques of the IS-95 over-the-air protocol including the use of CDMA signal modulation).

Regarding claim 7, Bender et al. disclose a mobile communication system wherein said home system comprises a mobile communication system according to code division multiple access principles. (Col. 3, lines 60-67; col. 4, lines 33-37, wherein a mobile unit (20) interfaces with base station (22A), which is connected to home base station controller (24A), via RF signals modulated in accordance with the IS-95 standard, and using CDMA modulation techniques).

Regarding claim 8, Bender et al. disclose a base station controller in a mobile communication system, said base station controller comprising: an interconnection to a first mobile switching center, said interconnection having channel station data indicative of whether there is a channel between said first mobile switching center as a master station thereof and a second mobile switching center; and a control module for, when a hand-off control process is to be performed via said first mobile switching center as the master station while communication with a mobile station through a base station controlled by said base station controller, determining whether said first mobile switching center as the master station has a channel connected to said second mobile switching center or not, based on said channel station data (col. 5, lines 8-30, the mobile station receives pilot channel from base station 22B, located in the other system; in turn, the components within the base station controller, BSC 24A, determine that the strong pilot is actually from a base station located within the BSC 24B coverage area,

which corresponds to the foreign system; further, a handoff is requested in which the BSC 24 is defined for conducting the inter-system handoff).

Regarding claim 9, Bender et al. disclose the base station controller, wherein, if said first mobile switching center as the master station has a channel connected to said second mobile switching center, said control module further requests a hand-off control process as a process for switching communication channels for communication with said mobile station (Col. 4, lines 42-63; col. 5, lines 15-19 and 34-50, after determining that the base station 22B, which has transmitted the strongest channel pilot to the mobile, and which is controlled by BSC 24B, which belongs to the other system, where the mobile is heading, the BSC 24B requests a handoff. Consequently, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the BSCs react and coordinate in accordance with the mobile switching center commands; further, inherently, after receiving the request for channel resources from the home MSC, the other system MSC commands the controller of base station 22B to establish a reverse link and acquire the signal transmitted by the mobile station; therein, the various systems that make up BSC 24A exchange signaling and information (channel station data) using network packets that are routed by CIS (30). CCP (42) allocates and de-allocates resources for processing the call including signal processing resources within base stations (22A –22D) and selector resources within selector subsystem (40)).

Regarding claim 10, Bender et al. disclose a method of communicating with a mobile station, said method comprising: providing a base station controller in a mobile communication system wherein a mobile station is located, said base station controller

having an interconnection to a first mobile switching center, said interconnection having channel station data indicative of whether there is a channel between said first mobile switching center as a master station thereof and a second mobile switching center ((Col. 4, lines 42-63; col. 5, lines 15-19 and 34-50, after determining that the base station 22B, which has transmitted the strongest channel pilot to the mobile, and which is controlled by BSC 24B, which belongs to the other system, where the mobile is heading, the BSC 24B requests a handoff. Consequently, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the BSCs react and coordinate in accordance with the mobile switching center commands; further, inherently, after receiving the request for channel resources from the home MSC, the other system MSC commands the controller of base station 22B to establish a reverse link and acquire the signal transmitted by the mobile station; therein, the various systems that make up BSC 24A exchange signaling and information (channel station data) using network packets that are routed by CIS (30). CCP (42) allocates and de-allocates resources for processing the call including signal processing resources within base stations (22A – 22D) and selector resources within selector subsystem (40)); and determining, based on said channel station data, when a hand-off control process is to be performed via said first mobile switching center as the master station while communication with a mobile station through a base station controlled by said base station controller, whether or not said first mobile switching center as the master station has a channel connected to said second mobile switching center (col. 5, lines 8-30, the mobile station receives pilot channel from base station 22B, located in the other system; in turn, the

components within the base station controller, BSC 24A, determine that the strong pilot is actually from a base station located within the BSC 24B coverage area, which corresponds to the foreign system; further, a handoff is requested in which the BSC 24 is defined for conducting the inter-system handoff).

Regarding claim 11, Bender et al. disclose the method, further comprising: if said first mobile switching center as the master station has a channel connected to said second mobile switching center, requesting a hand-off control process as a process for switching communication channels for communication with said mobile station (col. 4, lines 42-63; col. 5, lines 15-19 and 34-50, after determining that the base station 22B, which has transmitted the strongest channel pilot to the mobile, and which is controlled by BSC 24B, which belongs to the other system, where the mobile is heading, the BSC 24B requests a handoff. Consequently, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that the BSCs react and coordinate in accordance with the mobile switching center commands; further, inherently, after receiving the request for channel resources from the home MSC, the other system MSC commands the controller of base station 22B to establish a reverse link and acquire the signal transmitted by the mobile station; therein, the various systems that make up BSC 24A exchange signaling and information (channel station data) using network packets that are routed by CIS (30). CCP (42) allocates and de-allocates resources for processing the call including signal processing resources within base stations (22A – 22D) and selector resources within selector subsystem (40)).

Regarding claim 12, Bender et al. disclose the mobile communication system, wherein said master station comprises a home system for a mobile station, and said channel between said master station and said another mobile switching center comprises an interconnection to exchange information of mobile stations between mobile switching centers (col. 4, lines 28-63, the mobile may travel between its home coverage and the other system coverage; furthermore, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that CDMA communication systems and other cellular systems comprise of a number of MSCs spread around their coverage areas, therein managing their base station controllers for channel connectivity among the mobile mobility through their coverage areas).

Regarding claim 13, Bender et al. disclose the mobile communication system, wherein said home master station loses a control of a mobile station whenever said mobile station moves to said another mobile switching center (col. 5, lines 1-51, a mobile station after crossing into the area of the other system would be under the other BSCs control, consequently under the other MSC management).

Regarding claim 14, Bender et al. disclose the mobile communication system, wherein said interconnection to exchange information of mobile stations between mobile switching centers is used to maintain the communication of a mobile station after a hand-off is made (col. 5, lines 1-19; col. 7, lines 46-67; col. 8, lines 1-16, a connection would be maintained while a mobile moves from one coverage area to the other; that is continuing with its channel transmission reliability).

Regarding claim 15, Bender et al. disclose the mobile communication system, wherein said master station comprises a home system for a mobile station, and said channel between said master station and said another mobile switching center comprises an interconnection to exchange information of mobile stations between mobile switching centers (col. 4, lines 28-63, the mobile may travel between its home coverage and the other system coverage; furthermore, it is inherent as evidenced by the fact that one of ordinary skill in the art would have recognized that CDMA communication systems and other cellular systems comprise of a number of MSCs spread around their coverage areas, therein managing their base station controllers for channel connectivity among the mobile mobility through their coverage areas).

Regarding claim 16, Bender et al. disclose the mobile communication system, wherein said home master station loses a control of a mobile station whenever said mobile station moves to said another mobile switching center (col. 5, lines 1-51, a mobile station after crossing into the area of the other system would be under the other BSCs control, consequently under the other MSC management).

Regarding claim 17, Bender et al. disclose the mobile communication system, wherein said interconnection to exchange information of mobile stations between mobile switching centers is used to maintain the communication of a mobile station after a hand-off is made (col. 5, lines 1-19; col. 7, lines 46-67; col. 8, lines 1-16, a connection would be maintained while a mobile moves from one coverage area to the other; that is continuing with its channel transmission reliability).

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julio R Perez whose telephone number is (703) 305-8637. The examiner can normally be reached on Monday - Friday, 7:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika Gary can be reached on (703) 308-0123. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JP
4/15/04

ERIKA GARY
PATENT EXAMINER